

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

SECURITIES AND EXCHANGE COMMISSION,

Plaintiff,

v.

RIPPLE LABS INC., BRADLEY
GARLINGHOUSE, and CHRISTIAN A.
LARSEN,

Defendants.

Case No. 20-CV-10832 (AT) (SN)

**DEFENDANTS' MEMORANDUM OF LAW IN SUPPORT OF THEIR
MOTION TO EXCLUDE THE TESTIMONY OF [REDACTED], PH.D.**

TABLE OF CONTENTS

INTRODUCTION 1

LEGAL STANDARD 2

ARGUMENT..... 3

I. ██████ Opinions Should Be Excluded Because His Event Study Is Unreliable 3

 A. ██████ Event Study Is Unreliable Because The Market For XRP Is Inefficient..... 3

 B. ██████ Event Study Is Unreliable Because His Data Selection Is Methodologically
 Unsound..... 6

II. ██████ Cannot Reliably Offer An Opinion That Ripple’s Actions Caused The Price Of
XRP To Increase..... 10

III. ██████ Cannot Reliably Quantify XRP Price Increases Allegedly Caused By Ripple’s
Actions..... 12

 A. ██████ But-For Methodology Has No Support In The Relevant Scientific
 Community 12

 B. ██████ Supplemental Methodology Produces Implausible Results 13

 C. ██████ But-For Opinion Is Based On Internally Contradictory Results 14

CONCLUSION..... 15

TABLE OF AUTHORITIES

<i>7 W. 57th St. Realty Co. v. Citigroup, Inc.</i> , 771 F. App'x 498 (2d Cir. 2019).....	4
<i>Amorgianos v. Nat'l R.R. Passenger Corp.</i> , 303 F.3d 256 (2d Cir. 2002).....	3, 12
<i>Bricklayers & Trowel Trades Int'l Pension Fund v. Credit Suisse First Boston</i> , 853 F. Supp. 2d 181 (D. Mass. 2012).....	8
<i>Brown v. China Integrated Energy Inc.</i> , 2014 WL 12576643 (C.D. Cal. Aug. 4, 2014)	7-8
<i>Carpenters Pension Tr. Fund of St. Louis v. Barclays PLC</i> , 310 F.R.D. 69 (S.D.N.Y. 2015).....	4
<i>Chen-Oster v. Goldman, Sachs & Co.</i> , 2022 WL 814074 (S.D.N.Y. Mar. 17, 2022)	6
<i>In re Chicago Bridge & Iron Co. N.V. Sec. Litig.</i> , 2019 WL 5287980 (S.D.N.Y. Oct. 18, 2019)	10
<i>Daniels-Feasel v. Forest Pharms., Inc.</i> , 2021 WL 4037820 (S.D.N.Y. Sept. 3, 2021)	3, 7, 11
<i>Daubert v. Merrell Dow Pharms., Inc.</i> , 509 U.S. 579 (1993)	2, 3, 7, 20
<i>Evans v. Medtronic, Inc.</i> , 2005 WL 3547240 (W.D. Va. Dec. 27, 2005)	14
<i>Fener v. Operating Eng'rs Constr. Indus. & Miscellaneous Pension Fund (LOCAL 66)</i> , 579 F.3d 401 (5th Cir. 2009).....	9
<i>In re Fed. Home Loan Mortg. Corp. (Freddie Mac) Sec. Litig.</i> , 281 F.R.D. 174 (S.D.N.Y. 2012).....	3, 15
<i>In re LIBOR-Based Fin. Instruments Antitrust Litig.</i> , 299 F. Supp. 3d 430 (S.D.N.Y. 2018)	10, 13, 14, 15
<i>Lippe v. Bairnco Corp.</i> , 99 F. App'x 274 (2d Cir. 2004).....	13, 14, 15
<i>Malletier v. Dooney & Bourke, Inc.</i> , 525 F. Supp. 2d 558 (S.D.N.Y. 2007)	9, 15

<i>Maniatis v. New York Hosp.-Cornell Med. Ctr.</i> , 58 F. Supp. 2d 221 (S.D.N.Y. 1999)	11-12
<i>In re Petrobras Sec.</i> , 862 F.3d 250 (2d Cir. 2017)	9
<i>In re REMEC Inc. Sec. Litig.</i> , 702 F. Supp. 2d 1202 (S.D. Cal. 2010)	9-10, 11
<i>In re Rezulin Prods. Liab. Litig.</i> , 369 F. Supp. 2d 398 (S.D.N.Y. 2005)	6
<i>In re Sec. Capital Assur. Ltd. Secs. Litig.</i> , 729 F. Supp. 2d 569 (S.D.N.Y. 2010)	6
<i>Sheehan v. Daily Racing Form, Inc.</i> , 104 F.3d 940 (7th Cir. 1997)	11
<i>Teamsters Local 445 Freight Div. Pension Fund v. Bombardier Inc.</i> , 546 F.3d 196 (2d Cir. 2008)	3, 9, 10
<i>United States v. Williams</i> , 506 F.3d 151 (2d Cir. 2007)	2
<i>In re Vale S.A. Sec. Litig.</i> , 2022 WL 122593 (E.D.N.Y. Jan. 11, 2022)	7
<i>In re Vivendi, S.A. Sec. Litig.</i> , 838 F.3d 223 (2d Cir. 2016)	5-6
<i>Wills v. Amerada Hess Corp.</i> , 379 F.3d 32 (2d Cir. 2004)	12, 13
<i>In re Xerox Corp. Sec. Litig.</i> , 746 F. Supp. 2d 402 (D. Conn. 2010)	4

RULES AND REGULATIONS

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Daniel R. Fischel, <i>Efficient Capital Markets, The Crash, and the Fraud on the Market Theory</i> , 74 Cornell L. Rev. 907 (1989)	4
David I. Tabak & Frederick C. Dunbar, <i>Materiality and Magnitude: Event Studies in the Courtroom</i> , Litigation Services Handbook 19-2 (3d ed. 2001)	5
Dirk F. Gerritsen, et al., <i>Can Bitcoin Investors Profit from Predictions by Crypto Experts?</i> , Finance Research Letters 1 (2021)	5
John Detrixhe, <i>Blockchain dreams do come true: A big Spanish bank's customers can now use it to transfer money</i> , Quartz (Apr. 12, 2018), https://qz.com/1251001/santander-launched-a-blockchain-based-service-for-international-money-transfers/	8
John J. Binder, <i>The Event Study Methodology Since 1969</i> , 11 Review of Quantitative Finance and Accounting 111 (1998)	5
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Sam Jacobs, <i>Western Union says it's testing transactions using Ripple technology</i> , Markets, Business Insider (Feb. 14, 2018), https://www.businessinsider.com/ripple-xrp-western-union-testing-transactions-using-technology-2018-2	8

INTRODUCTION

None of the opinions set forth in Dr. [REDACTED] two expert reports satisfy the requirements of Federal Rule of Evidence 702. [REDACTED] offers a series of opinions, each based on an event study he conducts. When performed correctly, an event study is a statistical test that may identify *correlations* between events and asset price movements. But [REDACTED] commits four serious methodological errors, which render his event study and each of his resulting opinions wholly unreliable. For the reasons discussed below, [REDACTED] opinions should be excluded in their entirety.

First, [REDACTED] admits that XRP did not trade in an efficient market. Under well-settled Second Circuit law, as confirmed by economic literature, an event study cannot reliably correlate events with asset prices in an inefficient market.

Second, [REDACTED] improperly manipulates the data he selects for his event study by *excluding* all days on which his models identify abnormal *negative* XRP price returns—that is, he omits from his study the days that could undermine his opinion that Ripple’s actions caused *positive* XRP price returns. He also includes confounding data in his event study by including in his analysis actions by third parties in which *Ripple was not involved*. Thus, [REDACTED] cannot reliably offer an opinion that a correlation exists between Ripple’s actions and XRP price returns.

Third, [REDACTED] uses the results from this deeply flawed event study to offer the opinion that Ripple’s actions *caused* XRP prices to increase. But an event study, even when performed correctly, does not prove causation. Courts routinely exclude experts who use evidence of a simple statistical correlation to offer opinions about causation, as [REDACTED] does.

Finally, the opinions in [REDACTED] Supplemental Report must also be excluded for additional, independent, reasons. In his Supplemental Report, [REDACTED] claims to *quantify* the amount by which Ripple’s actions supposedly inflated the price of XRP. Specifically, he claims that, “but for” Ripple’s actions on only 19 to 24 days during a six-year period (with his 20 different models each

identifying different sets of 19 to 24 days), the market price of XRP would rarely have exceeded \$0.02.¹ But the methodology [REDACTED] uses to quantify this purported price inflation is entirely unreliable. *First*, [REDACTED] invents it out of whole cloth. It has never been accepted anywhere: not in peer-reviewed papers and not by courts in litigation. *Second*, applying [REDACTED] “but for” methodology, *any* arbitrarily selected set of 19 to 24 days with abnormally high XRP price returns (such as Wednesdays, or days the New York Yankees won a home game) could also be labeled the “but for” cause of XRP’s price increases. *Third*, [REDACTED] again excludes known data—days with negative XRP price returns—that would undermine his preferred conclusion.

Standing alone, any one of these methodological deficiencies would require the Court to exclude [REDACTED] opinions under Rule 702. Together, they overwhelmingly establish that allowing [REDACTED] to testify before the jury would inject reversible error into this trial.

LEGAL STANDARD

The SEC bears “the burden of establishing by a preponderance of the evidence that” [REDACTED] opinion satisfies “the admissibility requirements of” Rule 702. *United States v. Williams*, 506 F.3d 151, 160 (2d Cir. 2007). Rule 702 permits an expert to testify only if “(a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.” In applying Rule 702, the Court must consider four *Daubert* factors: “(1) whether a theory or technique can be (and has been) tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) a technique’s known or potential rate of error, and the existence and maintenance of standards

¹ The market price of XRP on October 28, 2020, the date of the last Ripple action analyzed in [REDACTED] Supplemental Report, was \$0.25.

controlling the technique's operation; and (4) whether a particular technique or theory has gained general acceptance in the relevant scientific community.” *Amorgianos v. Nat’l R.R. Passenger Corp.*, 303 F.3d 256, 266 (2d Cir. 2002) (cleaned up) (citing *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 593 (1993)). “To warrant admissibility . . . it is critical that an expert’s analysis be reliable at every step.” *Id.* at 267.

ARGUMENT

I. [REDACTED] OPINIONS SHOULD BE EXCLUDED BECAUSE HIS EVENT STUDY IS UNRELIABLE

To be admissible, expert testimony must be “the product of reliable principles and methods.” *See* Fed. R. Evid. 702(c). A “methodologically unsound or unreliable” “event study” must be excluded under Rule 702(c). *Teamsters Local 445 Freight Div. Pension Fund v. Bombardier Inc.*, 546 F.3d 196, 208 n.15 (2d Cir. 2008); *see also In re Fed. Home Loan Mortg. Corp. (Freddie Mac) Sec. Litig.*, 281 F.R.D. 174, 179-81 (S.D.N.Y. 2012) (rejecting event studies on methodological grounds). The event study that [REDACTED] relies on for each of his opinions includes serious methodological flaws, as do the opinions he derives from that study. These flaws trigger this Court’s “‘gatekeeping’ responsibility” to keep “misleading” expert testimony away from the factfinder. *Daniels-Feasel v. Forest Pharms., Inc.*, 2021 WL 4037820, at *3, *11 (S.D.N.Y. Sept. 3, 2021) (quoting *Daubert*, 509 U.S. at 597).

A. [REDACTED] Event Study Is Unreliable Because The Market For XRP Is Inefficient

Each of the opinions in [REDACTED] Opening and Supplemental Reports are dependent on an event study in which [REDACTED] claims to identify a statistically significant temporal correlation between purported Ripple actions and abnormal, positive, XRP price returns. But, as [REDACTED] acknowledges

in his Opening Report, *see* Ex. A, Expert Report of ██████ ¶ 35 (Oct. 6, 2021) (“█████ Rep.”),² and admitted during his deposition,³ the market for XRP is inefficient. It is well-settled that, in an *inefficient* market,⁴ an event study cannot reliably identify any statistically significant correlation between specific events and asset prices. As explained by the Second Circuit, the “opacity and illiquidity” of a market “bars” the court from using “economic tools” like “event studies.” 7 *W. 57th St. Realty Co. v. Citigroup, Inc.*, 771 F. App’x 498, 504 (2d Cir. 2019).⁵ Applying that principle, the Second Circuit held that, in the absence of an efficient market, economic analysis could not reliably establish any relationship between a particular alleged action and a “bond portfolio[’s] . . . decline in value.” *Id.* ██████ event study methodology repeats the specific flaw

² Citations to “Ex. ____” refer to exhibits attached to the accompanying Declaration of Kylie Chiseul Kim.

³ *See* Ex. B, Feb. 18, 2022 Dep. Tr. of ██████ 93:18-94:3 (“█████ Tr.”) (admitting that “the XRP digital token market was likely not semi-strong efficient”).

⁴ Courts have recognized three levels of market efficiency: weak form (price “reflects all information about past [asset] prices”), semi-strong form (price “reflects all public information concerning the [asset]”), and strong form (price reflects “all relevant information, public and private”). *See Carpenters Pension Tr. Fund of St. Louis v. Barclays PLC*, 310 F.R.D. 69, 77-78 (S.D.N.Y. 2015) (citing Daniel R. Fischel, *Efficient Capital Markets, The Crash, and the Fraud on the Market Theory*, 74 Cornell L. Rev. 907, 910-11 (1989)). There are also fully inefficient markets, in which the price does not even reflect information about past prices. Only semi-strong form and strong form are considered “efficient market[s]”; because prices in the weak form market only reflect “past prices,” “it is impossible to predict future prices” based on past prices alone. *Id.* at 78. This memorandum uses the term “inefficient market” to refer to a market that is either weak-form efficient or fully inefficient.

⁵ *See also IBEW Local 90 Pension Fund v. Deutsche Bank AG*, 2013 WL 5815472, at *21 (S.D.N.Y. Oct. 29, 2013) (“In the absence of an efficient market, . . . whether or not certain material information (including the alleged misstatements or omissions) was impounded into the stock price cannot be assumed—it may or may not have occurred.”); *In re Nuveen Funds/City of Alameda Sec. Litig.*, 2011 WL 1842819, at *7-8 (N.D. Cal. May 16, 2011) (finding that a lack of efficiency “mak[es] it impossible to establish a temporal link between the ‘trading price’ of the [asset] and the release of information”), *aff’d*, 730 F.3d 1111 (9th Cir. 2013); *In re Xerox Corp. Sec. Litig.*, 746 F. Supp. 2d 402, 408 n.1 (D. Conn. 2010) (noting that “[a] useful event study will rely on the efficient market hypothesis”); *Teamsters Loc. 445 Freight Div. Pension Fund v. Bombardier, Inc.*, 2006 WL 2161887, at *6 n.70 (S.D.N.Y. Aug. 1, 2006) (“an inefficient market, by definition, does not incorporate into its price all the available information about the value of a security”), *aff’d*, 546 F.3d 196 (2d Cir. 2008).

the Second Circuit identified in *Citigroup*—he reaches opinions based on an econometric model that he applied to prices reported in an inefficient market.

█ himself cites a leading treatise on event studies that makes clear the event study methodology can be used only “*under the maintained hypothesis of market efficiency*.” John J. Binder, *The Event Study Methodology Since 1969*, 11 Rev. of Quantitative Fin. & Acct. 111, 111 (1998) (emphasis added) (cited in █ Rep. ¶ 28 n.31).⁶ █ nevertheless claims that his event study methodology is reliable because certain academic studies have applied event studies to inefficient cryptocurrency markets. █ Rep. ¶¶ 36-38; █ Tr. 71:7-20. But the academic studies that he identifies undermine his claim. Those papers use event studies to demonstrate that certain digital asset markets are inefficient; as a result, none attempt to correlate specific events to particular changes in asset prices (because, in an inefficient market, they cannot do so). *See, e.g.*, Mohammad Hashemi Joo *et al.*, *Announcement Effects in the Cryptocurrency Market*, 52 Applied Econ. 4794, 4795 (2020) (concluding that the lack of an efficient market created arbitrage opportunities); Dirk F. Gerritsen *et al.*, *Can Bitcoin Investors Profit from Predictions by Crypto Experts?*, Fin. Res. Letters 1, 2 (2021) (testing “the degree of market efficiency of Bitcoin”).

It necessarily follows that the correlations █ claims to identify, and on which all of his opinions depend, are unreliable. In an inefficient market, █ event study cannot establish that XRP prices meaningfully correlate to Ripple’s actions, as opposed to other factors. *See In re*

⁶ *See also* David I. Tabak & Frederick C. Dunbar, *Materiality and Magnitude: Event Studies in the Courtroom*, Litig. Servs. Handbook 19-2 (3d ed. 2001) (“Event studies of the type used in litigation rely on . . . the Efficient Market Hypothesis, which states that stock prices in an actively traded security reflect all publicly available information and respond quickly to new information.”); Ex. C, Expert Rebuttal Report of Daniel Fischel ¶ 27 (Nov. 12, 2021) (“Fischel Rebuttal Rep.”) (“When an event study is used to measure the impact of certain events on market prices, it is explicitly assumed that the market is efficient, at least with respect to publicly available information.”).

Vivendi, S.A. Sec. Litig., 838 F.3d 223, 253 (2d Cir. 2016) (the probative value of an event study depends on its ability to “disentangle[] the effects of two types of information on [] prices”—specific events and confounding factors (e.g., “information that is likely to affect [] prices marketwide”)).⁷

B. [REDACTED] Event Study Is Unreliable Because His Data Selection Is Methodologically Unsound

[REDACTED] opinions are also unreliable because he ignores relevant data that would undermine his preferred conclusion, and includes data that is irrelevant and not “a fair proxy” for the process he claims to analyze. *Chen-Oster v. Goldman, Sachs & Co.*, 2022 WL 814074, at *8 (S.D.N.Y. Mar. 17, 2022) (Torres, J.). Expert opinion that “ignore[s] a large amount of information that call many aspects of [a party’s] . . . theory into question” and “discusse[s] only the evidence that [he] believe[s] would advance [that party’s] position . . . cannot be said to reflect ‘the same level of intellectual rigor that characterizes the practice of an expert in the relevant field’” and should be excluded. *In re Rezulin Prods. Liab. Litig.*, 369 F. Supp. 2d 398, 425-26 (S.D.N.Y. 2005).

First, [REDACTED] deliberately ignores facts and data that would undermine his ultimate opinion that Ripple actions were correlated with *positive* XRP price returns. To do so, he excludes relevant

⁷ This error is made even clearer by [REDACTED] attempt to address this market inefficiency by expanding from three days to seven days the “window” his study uses to determine whether prices react to events. [REDACTED] Rep., App’x E at 16. [REDACTED] cannot identify any authority that supports the suggestion that using a seven-day price “window” overcomes the methodological error of applying event study methodology to an inefficient market. Indeed, the opposite is true. Using a longer window in an event study increases the likelihood that confounding factors are correlated with observed price changes, which makes the event study less, rather than more, reliable. *See In re Sec. Capital Assurance, Ltd. Sec. Litig.*, 729 F. Supp. 2d 569, 600 n.5 (S.D.N.Y. 2010) (“long event windows may include noise and information from other events, making it difficult to isolate the impact of the relevant event”); Fischel Rebuttal Rep. ¶ 29 (“[T]he use of longer event windows . . . introduces the potential impact from other new information, as well as noise.”). Unsurprisingly, [REDACTED] does not claim that the market for XRP became efficient by using a seven-day window. [REDACTED] use of an extended seven-day window only underscores the unreliability of his methodology.

data at each step of his methodology.

Specifically, ██████ begins by identifying more than 514 Ripple actions, each sourced from an announcement posted on Ripple’s website prior to December 22, 2020. ██████ Rep. ¶ 49. This initial step is itself designed to filter out data that ██████ does not expect to support his ultimate conclusion: he assumes (though without support) that each of these announcements convey *positive* news about XRP (otherwise, he reasoned, Ripple would not have included them on its website). *Id.* ¶ 51. Next, ██████ excludes 401, or nearly 80%, of these 514 “Ripple actions” because, he explains, they “just [did]n’t seem like the sort of thing that would move prices.” ██████ Tr. 85:24-86:19, 128:20-129:15.⁸ ██████ then excludes, for each of his 20 models, every day that the model predicts an abnormal *negative* XRP price return. *See* ██████ Rep. ¶ 51. ██████ then uses a regression to conclude that there is a statistically significant correlation between Ripple news and positive XRP price returns—which is no surprise, since ██████ excluded news that he expected to be negative, news that he didn’t think would affect prices, and days with negative price returns.

██████ bias in his selection of the facts and data used in his event study renders his methodology, and any opinion derived from that methodology, “incomplete, selective, misleading, and ultimately unreliable” and the “the product of a mere conclusion-oriented selection process.” *Daniels-Feasel*, 2021 WL 4037820, at *17 (internal quotation marks omitted). “For these reasons,” this Court should find ██████ opinions “to be unreliable and therefore inadmissible under *Daubert* and Rule 702.” *Id.*; *see also Brown v. China Integrated Energy Inc.*, 2014 WL 12576643,

⁸ *See, e.g.,* ██████ Tr. 125:7-14 (admitting that he did not use any “external guidance or factors” to support this exclusion); *id.* at 131:9-10, 149:19-151:21 (██████ selected events he found “interesting” and excluded events he thought were “not worth testing”). *But see In re Vale S.A. Sec. Litig.*, 2022 WL 122593, at *11-13 (E.D.N.Y. Jan. 11), *rep. and recomm. adopted*, 2022 WL 969724 (E.D.N.Y. Mar. 31, 2022) (rejecting opinion of expert who limited data selection to events he subjectively found “‘noteworthy,’ ‘surprising,’ or ‘new’”).

at *7 (C.D. Cal. Aug. 4, 2014) (excluding the opinion of an expert who tested only the events that he “believe[d] was of the import necessary to change the price of [defendant’s] stock by a statistically significant amount”) (internal quotation marks omitted); *Bricklayers & Trowel Trades Int’l Pension Fund v. Credit Suisse First Boston*, 853 F. Supp. 2d 181, 188 (D. Mass. 2012) (rejecting event study that “cherry-picked” “event days” that supported expert’s conclusion, and controlled for those that did not), *aff’d sub nom. Bricklayers & Trowel Trades Int’l Pension Fund v. Credit Suisse Sec. (USA) LLC*, 752 F.3d 82 (1st Cir. 2014).

Second, █████ compounds this error by failing to distinguish between announcements that reported actions *by Ripple* from announcements that reported actions *by third parties* in which Ripple was not involved. For example, █████ includes in his event study actions by *other companies* that joined Ripple’s network, *see, e.g.,* █████ Rep., App’x C, Event IDs 17, 255, 299, 319, 358;⁹ as well as actions by *trading platforms* that decided—independent of Ripple—to list XRP, *see* █████ Rep. ¶ 77 (listing event numbers).¹⁰ In other words, █████ includes *third-party*

⁹ See Philip Ryan, *Ripple Ecosystem Expands with British Startup Ripula*, Bank Automation News (Oct. 27, 2014), <https://bankautomationnews.com/allposts/payments/ripple-ecosystem-expands-with-british-startup-ripula/> (Event 17); Brady Dale, *Standard Chartered, Axis Launch Payments Service With Ripple Tech*, Markets, CoinDesk (Nov. 22, 2017), <https://www.coindesk.com/markets/2017/11/22/standard-chartered-axis-launch-payments-service-with-ripple-tech/> (Event 255); Sam Jacobs, *Western Union says it’s testing transactions using Ripple technology*, Markets, Business Insider (Feb. 14, 2018), <https://www.businessinsider.com/ripple-xrp-western-union-testing-transactions-using-technology-2018-2> (Event 299); John Detrixhe, *Blockchain dreams do come true: A big Spanish bank’s customers can now use it to transfer money*, Quartz (Apr. 12, 2018), <https://qz.com/1251001/santander-launched-a-blockchain-based-service-for-international-money-transfers/> (Event 319); Daniel Palmer, *TransferGo Opens Payments Corridor to India Using Ripple Tech*, Markets, CoinDesk (Sept. 5, 2018), <https://www.coindesk.com/markets/2018/09/05/transfergo-opens-payments-corridor-to-india-using-ripple-tech/> (Event 358).

¹⁰ █████ attempts to justify this error by suggesting that Ripple “appears to have been involved in at least some” of these exchange listing events. █████ Rep. ¶¶ 77 (fig. 16), 81. But this further confirms that his opinion is unreliable: even assuming, *arguendo*, Ripple was “involved in at least some” of the events █████ included in his event study, █████ makes no attempt to argue that *all* of the events “involved” Ripple actions, much less conduct any reliable analysis

actions in his event study, but then offers an opinion that *Ripple's* actions were statistically correlated with abnormal XRP price returns. This failure to distinguish and analyze distinctive events is a well-known error in event study methodology, which conflates the specific events being tested with “confounding” factors. ██████ admitted during his deposition that he did not review for confounding factors in reaching his opinion. *See* ██████ Tr. 212:12-17 (“Q. So you didn’t direct your staff, and you didn’t personally, conduct any Internet or other searches in order to determine whether there were confounding events . . . ? A. No. Again, it wasn’t necessary.”).

In order to “isolate the price impact of any one piece of information,” an expert must control for “confounding factors, such as other simultaneously released news about the company, the industry, or the geographic region.” *In re Petrobras Sec.*, 862 F.3d 250, 279 (2d Cir. 2017). If confounding factors are included in the event study, an expert cannot draw any meaningful inference from a statistical correlation between a specific category of events and abnormal price returns. *See Malletier v. Dooney & Bourke, Inc.*, 525 F. Supp. 2d 558, 676-77 (S.D.N.Y. 2007) (“Without considering and regressing confounding factors, there is a very plausible argument that some independent market factor was positively affecting the sales of both companies.”). As a result, courts routinely exclude expert opinions that fail to exclude potentially confounding factors. *See, e.g., Teamsters*, 546 F.3d at 209 (affirming rejection of event study that failed to isolate news specifically about the securities at issue from news about the corporation); *Fener v. Operating Eng’rs Constr. Indus. & Miscellaneous Pension Fund (LOCAL 66)*, 579 F.3d 401, 410 (5th Cir. 2009) (rejecting event study that examined a press release with three pieces of information, where two were unrelated to the expert’s analysis); *In re REMEC Inc. Sec. Litig.*, 702 F. Supp. 2d 1202,

to show that. To the contrary, his tentative assertion that Ripple “appears to have been involved in at least some” listing events implicitly concedes that Ripple was *not* involved in others.

1273-74 (S.D. Cal. 2010) (rejecting an event study that “fail[ed] to separate the loss caused by the disclosure of corrective information . . . from loss caused by the disclosure of other company-specific information”). This Court should exclude [REDACTED] opinions for the same reason.

II. [REDACTED] CANNOT RELIABLY OFFER AN OPINION THAT RIPPLE’S ACTIONS CAUSED THE PRICE OF XRP TO INCREASE

When there is “too great an analytical gap” between the “data and the opinion proffered,” courts must exclude “that unreliable opinion testimony.” *In re LIBOR-Based Fin. Instruments*, 299 F. Supp. 3d 430, 468 (S.D.N.Y. 2018) (quotation marks omitted). Such is the case here. [REDACTED] conducts an event study—which, even if properly run, could at most prove correlation—but seeks to offer an opinion that Ripple’s actions *caused* the price of XRP to rise. As discussed in Section III, *infra*, [REDACTED] then attempts *to quantify* the amount by which Ripple’s actions increased the price of XRP. Because [REDACTED] does not apply any methodology capable of determining causation, [REDACTED] causation conclusion—and his quantification—are supported “only by his *ipse dixit*, which is insufficient” under *Daubert. LIBOR*, 299 F. Supp. 3d at 500. His opinions should be excluded on this basis.

As [REDACTED] notes in his Opening Report, a properly conducted event study methodology could suggest the *possibility* of causation by establishing that Ripple’s actions temporally “coincide[d] with” XRP price increases “more frequently than random chance could explain.” [REDACTED] Rep. ¶¶ 47, 52. But it is axiomatic that an event study does not—and cannot—*establish* causation. *See Teamsters*, 546 F.3d at 207-08 (an event study can identify only the “correlat[ions]” between events and “fluctuations in price” even if it can be submitted in litigation as “evidence of the existence of . . . a causal relationship”); *In re Chicago Bridge & Iron Co. N.V. Sec. Litig.*, 2019 WL 5287980, at [REDACTED] S.D.N.Y. Oct. 18, 2019) (“Event studies merely allow experts and courts to draw inferences based on probability—they do not provide causal proof as to whether the

disclosure impacted the stock price . . .”), *rep. and recomm. adopted in part*, 2020 WL 1329354 (S.D.N.Y. Mar. 23, 2020); *Christian v. Generation Mortg. Co.*, 2014 WL 4494860, at *4 n.5 (N.D. Ill. Sept. 12, 2014) (collecting cases). This is not controversial; indeed, at his deposition, █████ agreed that “correlation doesn’t prove causation.” █████ Tr. 243:2-16; *see also id.* at 242:5-12 (“[c]ausation is not a question which is generally subject to proof as a matter of economics”).

But that is exactly what █████ has done: claim he has proved causation. *See, e.g., id.* at 250:6-251:5 (“I’m comfortable in offering the opinion that in my opinion, the evidence indicates that the news is causing the price.”).¹¹ Thus, in opining that Ripple’s actions caused the price of XRP to increase, █████ offers an opinion unsupported by his methodology. This requires exclusion: “[E]quating a simple statistical correlation to a causal relation . . . indicates a failure to exercise the degree of care that a statistician would use in his scientific work, outside of the context of litigation.” *Sheehan v. Daily Racing Form, Inc.*, 104 F.3d 940, 942 (7th Cir. 1997) (concluding that a statistical analysis making this error “would not have been admissible at trial”); *see also Daniels-Feasel*, 2021 WL 4037820, at *17 (rejecting an expert’s attempt to “support a . . . conclusion of causation” while simultaneously admitting that he had not done the required epidemiological work to prove causation); *REMEC*, 702 F. Supp. 2d at 1273 (excluding testimony of expert that improperly assumed that a statistically significant correlation between actual return and predicted return established causation); *Maniatis v. New York Hosp.-Cornell Med. Ctr.*, 58 F.

¹¹ *See, e.g.,* █████ Rep. ¶ 12 (“XRP prices *react* to certain news and public statements about Ripple’s actions”) (emphasis added); *id.* ¶ 65 (“[T]he price of XRP reacts to news of Ripple’s actions.”); █████ Tr. 231:18-21 (“What I have shown . . . is that . . . Ripple Labs does things to move XRP prices. XRP prices react to things that Ripple labs does. XRP prices react to things that happen to Ripple Labs.”); Ex. D, May 10, 2022 Suppl. Dep. Tr. of █████ 110:21-25 (“█████ Suppl. Tr.”) (“In my opinion, there is a connection between Ripple Labs and XRP prices, and the most likely explanation is that the news caused the price. Because other possible explanations seems unreasonable and unlikely.”).

Supp. 2d 221, 227 (S.D.N.Y. 1999) (noting that “[a]ny correlation indicated” by the expert’s analysis “is irrelevant to the question of causation”).

III. █████ CANNOT RELIABLY QUANTIFY XRP PRICE INCREASES ALLEGEDLY CAUSED BY RIPPLE’S ACTIONS

In his Supplemental Report, █████ compounds these methodological errors by using his event study to *quantify* the amount by which Ripple’s actions purportedly inflated the price of XRP. To do so, █████ invents a methodology for the purpose of this litigation that involves nothing more than an arithmetic exercise of replacing the abnormal positive XRP returns identified by his 20 models with the lower returns predicted by those models, on those days in which █████ believes there was a Ripple action. Ex. E, Suppl. Expert Report of █████ ¶ 12 (Feb. 28, 2022) (“█████ Suppl. Rep.”). From this, █████ reaches the opinion that, “but for” the abnormal positive returns on those days, “the USD price per XRP token would” have been lower. *Id.* ¶ 9. This is inadmissible junk science, for at least three reasons.

A. █████ But-For Methodology Has No Support In The Relevant Scientific Community

First, █████ “but for” methodology is not supported by a single peer-reviewed publication, a single court decision, nor any other reliable authority. One indication of the unreliability of an expert’s opinion is his use of a methodology that lacks support in the relevant scientific community. *See Amorgianos*, 303 F.3d at 266; *Wills v. Amerada Hess Corp.*, 379 F.3d 32, 48-49 (2d Cir. 2004) (Sotomayor, J.) (affirming district court’s exclusion of methodology that was not subjected to “peer review” and had not “gained general acceptance”). The purpose of this requirement is obvious: an expert should not be permitted to mislead a jury by offering “junk science” masquerading as “expert” testimony. *Amorgianos*, 303 F.3d at 267. Where, as here,¹²

¹² When asked during his supplemental deposition to identify any academic literature that supported his methodology, █████ generally referred to the academic literature cited in his Opening Report. But when pressed, █████ could not identify any specific article that did so. █████ Suppl.

there is “no evidence that [a] theory ha[s] been tested or subjected to peer review,” it is “entirely appropriate” to exclude opinions derived from that methodology. *Wills*, 379 F.3d at 49.

B. [REDACTED] Supplemental Methodology Produces Implausible Results

Second, [REDACTED] quantification of the XRP price inflation purportedly caused by Ripple’s actions should also be excluded because the methodology he uses—replacing larger XRP price returns with smaller ones—would yield the same result over the same time period if [REDACTED] had applied it to practically any arbitrary set of actions (*i.e.*, actions unrelated to Ripple). Courts exclude experts that utilize a methodology that “produces contradictory or otherwise implausible results,” *LIBOR-Based Fin. Instruments*, 299 F. Supp. 3d at 468, 501, or “assert[s] wildly implausible” results, *Lippe v. Bairnco Corp.*, 99 F. App’x 274, 278-79 (2d Cir. 2004). [REDACTED] but-for methodology is simple arithmetic (if you remove large price returns from a sequence, the final price at the end of the sequence will be lower); it is not a “methodology” that reliably calculates the amount by which *Ripple’s actions* allegedly inflated the price of XRP over a six-year period.

Ripple’s expert, Dr. Laurentius Marais, demonstrates the obvious flaws in [REDACTED] methodology. Marais applies [REDACTED] invented “but for” methodology to the abnormal positive XRP price returns identified by each of [REDACTED] regression models. But instead of substituting XRP price returns on days when there was a purported *Ripple action*, he does so when the abnormal XRP price return occurred on a *Wednesday*. The resulting quantification of the XRP price inflation is virtually identical to the opinion reached by [REDACTED] “but for” abnormal positive price returns that occurred on a Wednesday, the price of XRP—over the same period of time that [REDACTED] measured—would rarely have exceeded \$0.02. *See* Ex. F, Suppl. Expert Report of M. Laurentius Marais

Tr. 88:11-24. This is not surprising: not one of the articles in his Opening Report endorse, much less utilize, the but-for methodology used in his Supplemental Report. More importantly, there is no peer-reviewed study defendants are aware of that adopts (or even *considers* adopting) the self-invented methodology [REDACTED] uses in this case.

¶¶ 14-17 (May 13, 2022). It cannot be that █████ regression models reliably prove that both Wednesdays and Ripple actions simultaneously caused more than 90% of the total increase in XRP's price over the same six-year period.

The but-for methodology that █████ uses to support his opinion that Ripple's actions caused the price of XRP to increase is, on its face, unreliable and cannot establish that Ripple's actions inflated the price of XRP, much less reliably quantify that price inflation. *See LIBOR-Based Fin. Instruments*, 299 F. Supp. 3d at 468, 501 (excluding methodology because "[r]obustness testing and sensitivity testing that produces contradictory or otherwise implausible results strongly suggest that a methodology has been insufficiently tested and that the methodology has a high potential rate of error"); *see also Lippe*, 99 F. App'x at 278-79 (affirming district court's criticism of expert's valuation methodology that resulted in "wildly implausible valuations"); *cf. Evans v. Medtronic, Inc.*, 2005 WL 3547240, at *10-11 (W.D. Va. Dec. 27, 2005) (rejecting expert methodology that could also be used to conclude that another factor "caused" the injury). █████ but-for analysis should be excluded.

C. █████ But-For Opinion Is Based On Internally Contradictory Results

Finally, █████ but-for methodology must also be excluded because it relies on regression models that produce contradictory results. █████ is unable to identify which of his 20 models most accurately determine the "but for" price of XRP. This is a critical flaw: each of █████ 20 models identifies 19 to 24 *different days* on which there was an abnormal XRP price return, and each model predicts a *different XRP price return* on each of those different 19 to 24 days. The technical details in the workpapers underlying █████ but-for methodology illustrate how unreliable and contradictory his methodology is. For example, on May 16, 2017—the date Ripple announced that it would place 55 billion XRP in escrow—█████ models estimate a wide range of XRP price returns, some negative and some positive. More than half of his models do not predict an abnormal

return on that day and three predict a *negative* return; but a minority of his models list May 16, 2017 as one of the top 19 to 24 days that supposedly caused more than 90% of XRP's price increase. [REDACTED] Suppl. Rep. ¶ 11; Ex. G, [REDACTED] Suppl. Tr., Ex. 16. [REDACTED] 20 models disagree about other days as well, and no two models identify the same set of days. As a result, [REDACTED] opinion that, but for 19 to 24 Ripple actions, "the USD price per XRP token would have rarely exceeded \$0.02" is highly misleading and unreliable. [REDACTED] Suppl. Rep. ¶¶ 9, 16 (fig. 3).

Courts in this District exclude the opinions of experts derived from models that produce contradictory results and who, like [REDACTED], are unable to reconcile those contradictions. *See LIBOR-Based Fin. Instruments*, 299 F. Supp. 3d at 468, 477-78 (rejecting expert methodology due to inconsistent results across different models because such "inconsistent results are an 'indicia of unreliability'" (quoting *Lippe*, 99 F. App'x at 279); *Malletier*, 525 F. Supp. 2d at 569 (excluding methodology that produced results with "unexplained inconsistency"). In particular, other Courts in this District have declined to admit an expert's opinion that relies on "inconsistent event studies." *Freddie Mac Sec. Litig.*, 281 F.R.D. at 181.

That [REDACTED] 20 models each find abnormal XRP price returns on a different group of 19 to 24 days, and that [REDACTED] relies on 20 different groups of 19 to 24 days to quantify the aggregate price impact of Ripple actions, only confirm that [REDACTED] "methodology" is simple arithmetic with a preordained conclusion: replacing any group of days with large price returns with lower price returns will result in a significantly lower price. Because [REDACTED] cannot identify the days on which Ripple's actions allegedly caused XRP price to increase, [REDACTED] cannot reliably testify that, but for Ripple's actions, the price of XRP would not have exceeded \$0.02.

CONCLUSION

For the reasons above, the Court should exclude [REDACTED] opinions in their entirety.

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Respectfully submitted,

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